ActivO™

User Manual for Europe

2008

Activated by

ECO ZONE Technologies Ltd.

User Manual
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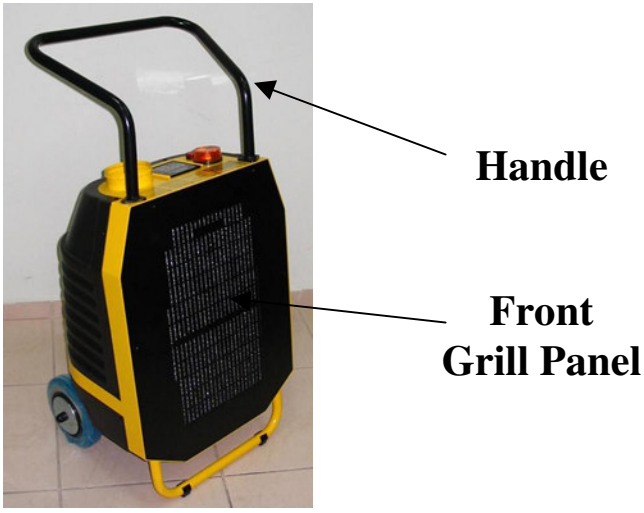
UNPACKING

❶ Open top flaps of carton. Gently place carton on its side.
Lift unit up slightly and then pull out by rolling on its wheels.

❷ Place handle on top panel and fasten 3 hex screws on each side.



1. General Information

Ecozone's **ActivO** is a mobile and easy-to-use deodorizing system for indoor use. This robust, computer controlled and automatic system is characterized by high safety standards. The system incorporates ECOZONE's unique ***ADA system***, a double-stage operating cycle that creates ozone and subsequently removes it, allowing the immediate reoccupation of treated spaces.

In the first stage the room is enriched with ozone (generated from the air using Ecozone's multi-patented technology) at a particularly high rate in order to reach homogeneous conditions and a high concentration level within the shortest possible time. In the second stage, any after-treatment residual ozone is decomposed into oxygen, so as to leave the treated room well within the regulated levels.

2. Declaration of Conformity

Model No. POCS-500 (POCS= Portable Odour Control System)
This unit fully complies with CE & FCC rules of EMC regulations.
EN 61000-61, EN 61000-62, EN 61010-1, EN 5501 EMC, FCC Part 15
Safety of Low Voltage Directive 73/23/EEC as Amended: EN 61010-1.

CE FC Federal Communications Commission

Safety Precautions & Warnings

Read this manual carefully before operating the unit.

Do not expose this equipment to rain or moisture. Should any liquid come into contact with the system, unplug it and have it serviced by qualified personnel before operating it further.

Unplug the system power plug when it is not in use.
When unplugging, never pull the plug by the cord itself.

DO NOT enter the treated room during the operation of the system, or before hearing the completion-of-cycle audio alert-signal.

This system is equipped with a ventilation inlet and a ventilation outlet.
DO NOT BLOCK inlet/outlet or place foreign objects in their vicinity which may block air flow. Place unit in the CENTER of the room.

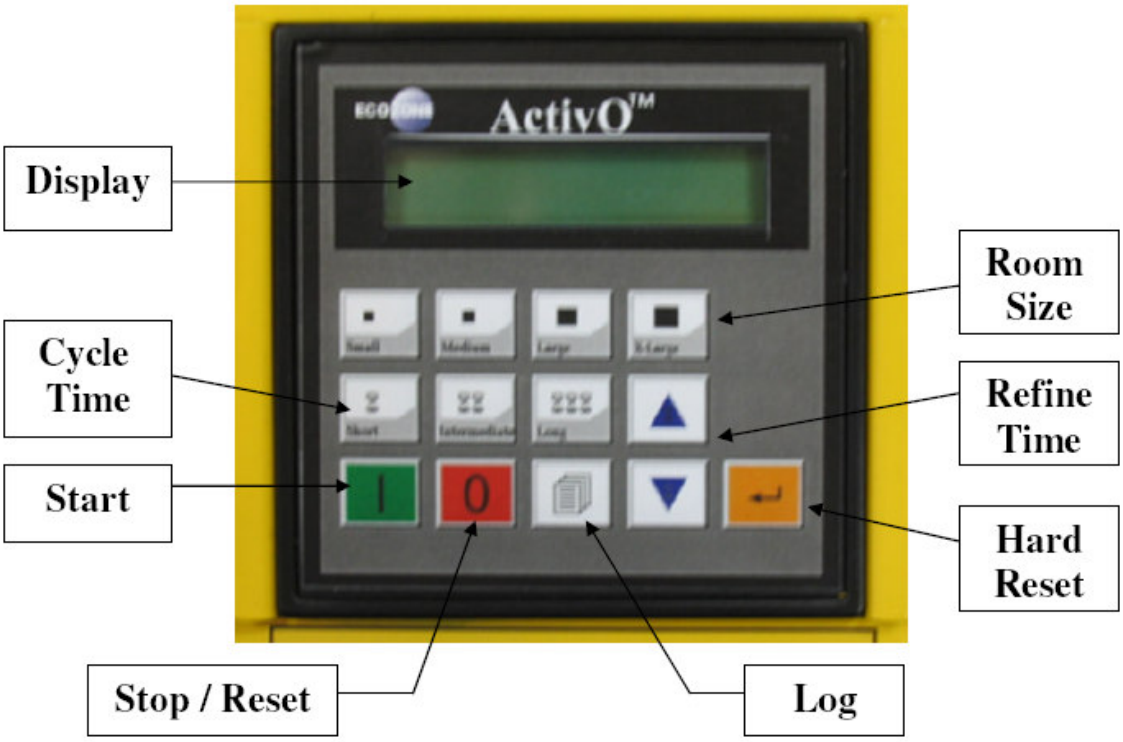
DO NOT disconnect cable cord from mains socket before the operation of the system is completed.

AVOID ELECTRICAL SHOCK

This unit is supplied with a earthed cable.
Attempting to bypass the earth or to connect the unit to an un earthed socket is strictly prohibited.
Under no circumstances should the unit be operated with the front panel grill loose or missing.
Prior to removing the grill for maintenance, always disconnect the unit from power.

There are no user serviceable parts inside the ActivO; removal of back panel by unauthorized personnel will result in **voiding the WARRANTY**!

3. The ActivO control panel and other indicators



4" dia. Air Outlet
Flashing: In Operation
Red Fault
Fuse
CAUTION
This Is An Ozone Machine For Eliminating Odors.
Remove People, Pets, Plants And Natural Rubber From Room Before Using.
PRECAUCION
Esto Es Una Maquina Del Ozono Para Eliminar Olores.
Desocupar Las Personas, Los Animales Domesticos Y Las Plantas Y Caucho Natural De Sitio Antes De Usar.
Follow User Manual
Sigue Instrucciones En El Manual

3. Technical Specifications

5.1 Description

The **ActivO** system is a portable high-duty and rugged system. It features the most advanced technology in the field of odour-control and air-treatment. The **ActivO** employs Ecozone's state-of-the-art and patented Singlet Unit which is characterized by relatively high activation rate and enhanced reliability.

5.2 Technical Specifications:

Input Voltage: 230V; 60Hz
Air Flow-Rate: 450 m^3/h.
Ozone output: 12g/h (12,000 mg/h)
Operation: Fully Automatic Activation & Deactivation Cycles.
Cycle time: Minimum 15 minutes, Maximum 48 hours.
With special input code: 72 hours, ozone generation only
Control: Digital keyboard
Display: LCD, 16 Digits.
Safety: Circuit breaker (overload switch): 4A
Amber Flashing Light Indicator (ActivO in operation)
Red Fault Indicator
Buzzer Alarm (operation has begun; operation has ended)
Differential Pressure Regulator (air flow obstructed)
Door Interlock (front panel not closed)
Dimensions: 50 x 40 x 100 cm, with handle attached
53 x 65 x 94 cm, packed for shipping, handle detached
Ozone outlet duct: 4″ diameter
Weight: 37 kg; packed for shipment 40 kg
Enclosure: Metal and ABS
Wheels: leave no tracks
Low EM Noise.
Certification: **CE** & **FCC**

5.3 Normal Environmental Conditions:

Indoor use only

Temperature: 0 ºC to 35 ºC

Humidity: maximum relative humidity: 95%;

ECOZONE Technologies has a policy of continuous product improvement and reserves the right to modify or change this specification at any time without notice.

4. Operation

Preparation and Connections

CAUTION

OZONE IS A POWERFUL OXIDIZER. USE THIS EQUIPMENT WITH CARE AND IN UNINHABITED AREAS ONLY. READ ALL OPERATING INSTRUCTIONS BEFORE USING THIS MACHINE.

RE-OCCUPY TREATED ROOM ONLY AFTER PRESET OPERATING TIME HAS ELAPSED AND THE AMBER FLASHING LIGHT HAS STOPPED FLASHING INDICATING THAT THE MACHINE IS NO LONGER IN OPERATION.

DO NOT ATTEMPT TO ENTER THE ROOM WHILE MACHINE IS IN OPERATION; VENTILATE ROOM AFTER USE

- **Connect** power cord to socket on ActivO's rear panel (bottom) and only then connect it to the power source socket.

6.1 **Controller settings**

❶ Press the ‘STOP’ (Red) button to Reset.

O STOP / RESET

The display will present a code followed by the alternating prompt: **Ready** and **Set Room Size.**

❷ Select ‘Room Size’ by pressing the respective keypad button.
Note: You may choose between the following 4 room sizes:

▪ **Small**; for room volumes below $30m^3$.

■ **Medium**; for room volumes between $30m^3$ and $60m^3$.

■ **Large**; for room volumes between $60m^3$ and $120m^3$.

■ **X-Large**; for room volumes from $120m^3$ to $500m^3$

The display will now prompt: **Set Time**

❸ Select the **Short/Intermediate/Long** time cycle by pressing the respective button on keypad.

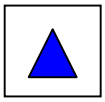
Note: Select length of cycle to correspond with the odour level in the room.

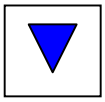
Short Cycle-Time (Light odor)

Intermediate Cycle-Time (Average odor)

Long Cycle-Time (Strong odour)

❹ Refine Time setting (optional) by pressing the **Up** or **Down** blue-arrow buttons to **extend** or to **shorten** the operation cycle time, respectively. Please refer to **reference chart** on page-13.

 **Up -** to extend cycle-time

 **Down -** to shorten cycle-time

Note: Time is indicated on LCD in hours and minutes.
h=hours and m=minutes.
For example 3 hours and 20 minutes would be indicated so:
3 h 20 m

❺ Press **green (I)** button for **START**.

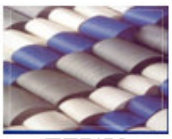
> ⚠ **CAUTION**
>
> **Before starting operation verify that the treated area has been vacated of people, animals, plants and items containing natural rubber**

EXAMPLES OF USE OF ITEMS CONTAINING NATURAL RUBBER

Items made of natural rubber (gum) are many and differ in their rubber content; the more rubber content, the greater their susceptibility to degradation by ozone.

Among the common items that may contain natural rubber are computer keyboards (rubber under the keys), floor squeegees, tubes (for bicycles), crepe soles (for shoes), rubber bands (various), gloves ('Latex'), smoked sheets, underlay, and more. **The common sense rule: when in doubt about whether the item contains natural rubber remove the item before treating the space. Or alternatively, smear the item's surface with Vaseline or equivalent before exposing it to ozone.**

KEYBOARD

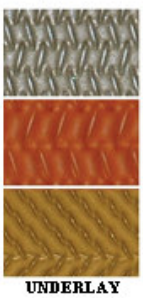

THREADS

TUBING, LINING, GASKET
E.G. OLD REFRIG DOORS

SQUEEGEE

NATURAL RUBBER

UNDERLAY


UNDERLAY

FOR SHOE SOLES

I **START** Operation

Place unit in CENTER of room. When treating smaller rooms you do not need to use air movers in order to circulate ozone since your ActivO sends ozone at a high rate of 265 CFM to the ceiling where it spreads out and drifts downward to cover all surfaces.

Note: If treating a crawl space attach 4" diameter ducting to ActivO Outlet (page 5). When using ActivO in this manner there will be no ozone deactivation. However ozone in the crawl space will deactivate naturally, typically in 3-6 hours.

The display will prompt you to '**Get Out of Room'** and the **amber "Hazard" light** will begin flashing.

Important!
The system will begin generation of ozone after a **60 second** delay in order to allow you to leave the room.

❻ **You must leave the room immediately**. Windows and doors should be closed to prevent ozone leakage.

Remaining in the treated area while unit is in operation or entering before completion of cycle may be hazardous to your health.

❼ **Outside** the room you will hear **a prolonged audio alert-signal** indicating that ozone generation has begun.

❽ After the full operation cycle is completed including removal of the ozone, you will hear a **second audio alert-signal** indicating that **operation is completed**.

❾ Upon entering the treated room, the display should read:
Operation Complete and the amber light should have stopped flashing.

CAUTION

In the event indications do not correspond to the above, leave the room immediately and call for ECOZONE service.

❿ After the operation has ended and before moving the machine elsewhere, be sure to disconnect the power cord from the power socket.

ATTENTION!

If at any time you need to reset the keyboard settings press:

STOP button (red O) on keypad.

Activation, Deactivation and Total Operating Times

Generation Time = **G**
Decomposition = **D**
Total Cycle Time = **T**
Inter = Intermediate

			Default Short			Default Inter			Default Long
Time (minutes)	***G***	***D***	***T***	***G***	***D***	***T***	***G***	***D***	***T***
Room Volume									
Small (<30m^3)	2	11	**15**	25	**18**	**45**	118	**60**	**180**
Medium (<60m^3)	6	22	**30**	34	**24**	**60**	268	**90**	**360**
Large (<120m^3)	20	38	**60**	126	**52**	**180**	1318	**120**	**1440**
X-Large (>120m^3)	178	120	**300**	598	**120**	**720**	2698	**180**	**2880**

Keyboard Controlled Maximum Change From Default Time

			Up Short			Up Inter			Down Long
Time (minutes)	***G***	***D***	***T***	***G***	***D***	***T***	***G***	***D***	***T***
Room Volume									
Small (<30m^3)	17	11	**30**	70	**18**	**90**	28	**60**	**90**
Medium (<60m^3)	21	22	**45**	154	**24**	**180**	88	**90**	**180**
Large (<120m^3)	50	38	**90**	666	**52**	**720**	598	**120**	**720**
X-Large (>120m^3)	238	120	**360**	1318	**120**	**1440**	1258	**180**	**1440**

5. Maintenance and Service

Maintenance of your ActivO is required every 500 hours in order to insure trouble-free performance. The ActivO keyboard will display a message indicating that 500 hours of operation have been reached by displaying **'Needs Service'.**

The ActivO is equipped with a special Ozone Filtering Unit; This Unit assures that upon completing the odour treatment cycle there will be no residual ozone left inside the room. The efficiency of this Unit will degrade in time and therefor it is mandatory to replace it after every 1,000 hours of operation.

If you have a 'good pair of hands' and follow these instructions carefully, this 3-step procedure should take you about 1 hour.

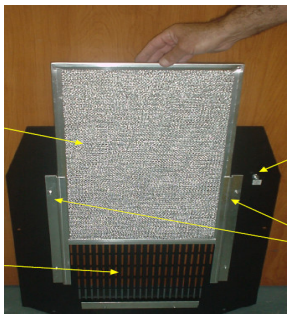
CAUTION - DISCONNECT POWER FROM THE ACTIVO BEFORE BEGINNING

PROCEDURE BEGINS NEXT PAGE

<u>Step 1</u> Clean Dust Filter (#25 in picture at bottom of this page)

a. Remove black front grill panel (#26) by unscrewing 6 screws. What you will then see is shown in the picture at the bottom of this page.

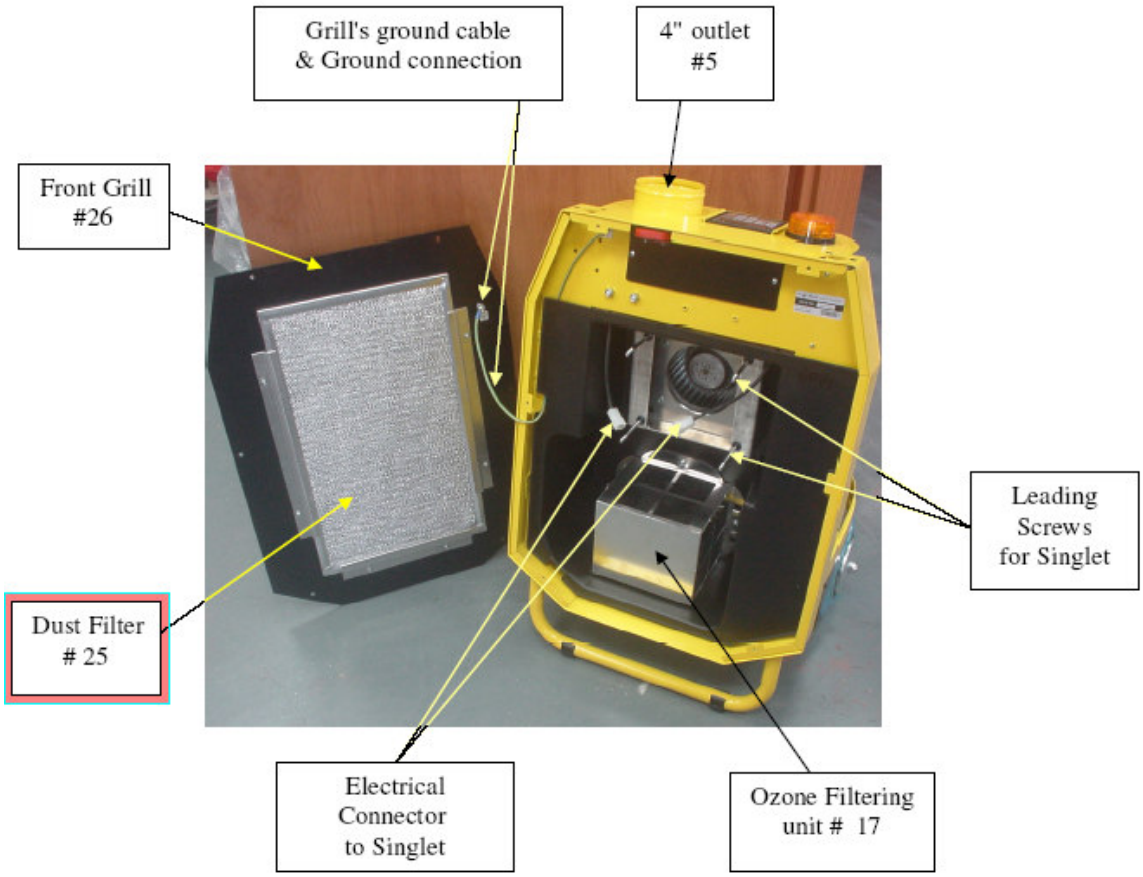
b. Loosen 6 screws in frame around dust filter (#25) so you can slide filter out. **Do not remove the earth cable connected to the grill.**



c. Gently slide filter up and out of its frame (see picture).

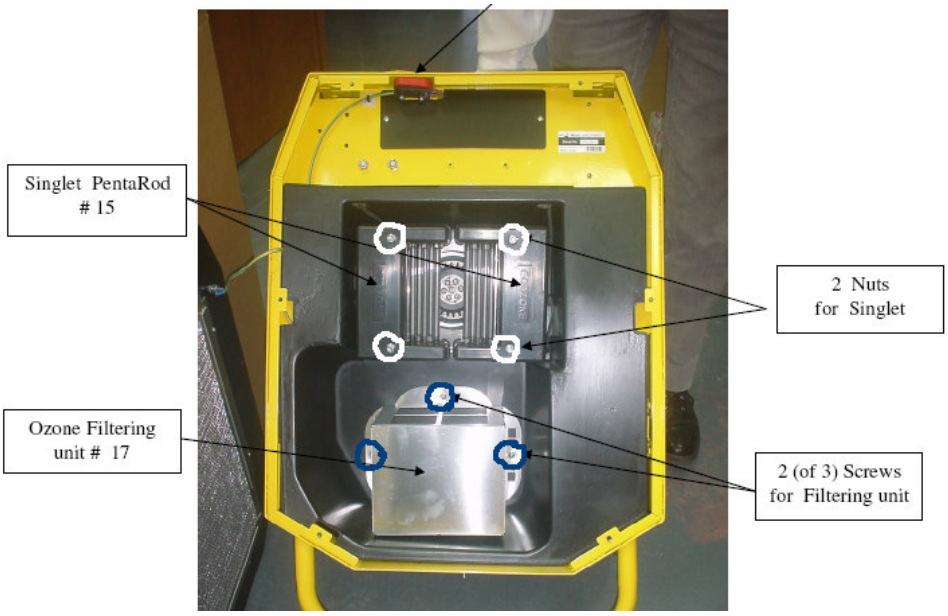
d. Place the filter under warm tap water and wash out dust. It is ok to use a mild liquid soap if needed to loosen the dust. Rinse and dry (ok to use hair dryer).

e. Slide Dust Filter back into its frame and retighten loosened screws.


Grill's ground cable & Ground connection
4" outlet #5
Front Grill #26
Leading Screws for Singlet
Dust Filter # 25
Electrical Connector to Singlet
Ozone Filtering unit # 17

<u>Step 2</u> Clean Ozone Generating Cores (Singlets) (#15 below)

a. There are two (2) Singlets to remove and clean.
They are shown side by side as #15 in this picture:



b. Remove the electrical connector from each (purple circles, picture on next page)

c. Unscrew the 2 nuts holding each Singlet unit (white circles above).

d. Gently pull out in parallel each Singlet from its leading screws (exposed, in white circles in picture below, shown after removal of Singlets). **Handle unit carefully.**

e. Clean the units under warm tap water, especially the gaps between the tubes*.
You may use a soft brush to remove any accumulated dirt.

Use care not to wet the electrical connector.

f. Dry the Singlet units with a soft towel.

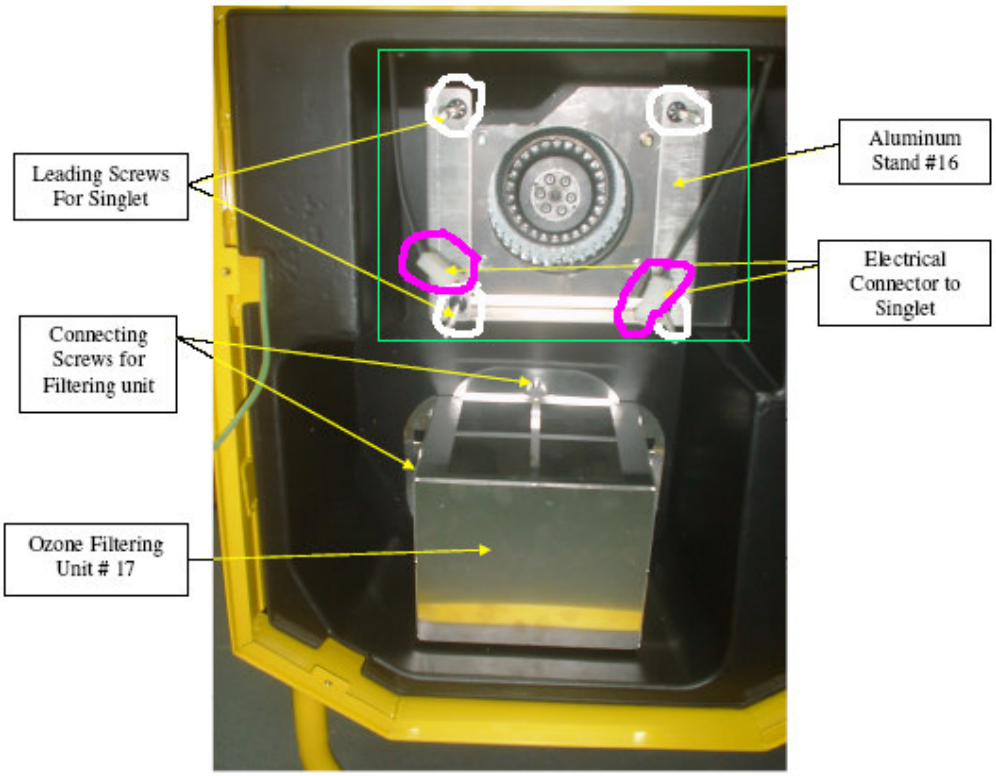
Continued Next Page

*<u>Note</u>: the tubes used in the ActivO are unlike tubes used in competitive ozone machines which are often fragile and easily broken. The ActivO tubes are specially designed for use in rugged DR (disaster recovery) environments.

g. Re-mount each Singlet on its leading screws – slide in parallel. **Be sure to re-insert Singlets so that the 3 tubes are on the side facing you.**

h. Re-attach the electrical connector to each Singlet (purple circles below) **Be sure the connectors are dry.**

i. Re-screw on the two nuts to each Singlet.


Leading Screws For Singlet
Aluminum Stand #16
Electrical Connector to Singlet
Connecting Screws for Filtering unit
Ozone Filtering Unit # 17

<u>Step 3</u> Close black front grill panel (#26, picture above page 16)

a. Replace the front grill making sure the dust filter is on the inside of the unit. **Make sure the earth cable to the grill is completely inside the unit.**

b. Re-screw the 6 screws around the frame of the panel.

<u>Step 4</u> Replacing Ozone Filtering Unit (# 17).

a. Open all screws (at 3 locations) connecting the used Ozone Filtering Unit (#17).

b. Remove the used Ozone Filtering Unit and replace it by the new Unit.

c. Screw and tight all screws (at exactly all 3 locations) to re-connect the new Ozone Filtering Unit inside the machine.

d. You may through the used Unit to the garbage.

6. Troubleshooting

Problem	Possible Solution
Display is blank and keypad does not function.	Check power cord connections. Check fuse (picture below). If fuse is blown, replace it. If it blows a second time, STOP and call Ecozone for assistance.
Display prompts "Ready" but keypad does not function.	❶ Disconnect and reconnect power cord. ❷ Wait for "Ready" prompt. ❸ Press STOP button (red) on keypad. ❹ Press hard RESET button (yellow) on keypad.
Red light (fault indication) is 'ON' and the display indicates one of the following fault codes: **a.** "AL: Presso-Stat" **b.** "AL: Micro-Switch"	❶ Make note of fault code indicated on the display. ❷ Disconnect power cord. ❸ CALL ECOZONE service.
Display shows: "Needs Service"	This notification will appear every 500 hours of use. Upon notification, please refer to Section 6 above, page 15.
Other	Call local ECOZONE distributor for technical support.

7. Warranty

WARRANTY

ECOZONE warrants to the original retail purchaser or licensee of the ActivO ("**Purchaser**") that the ActivO will conform to and perform in accordance with the published technical specifications and any accompanying written materials supplied by ECOZONE and will be free from defects in materials and workmanship under normal use and conditions for the applicable warranty period indicated below. This warranty does not extend to ActivO's that have been subject to misuse, accident, exposure to corrosive substances, tampering or use in a manner not approved by ECOZONE in writing. The Ozone Filtering Unit (shown in the picture on page 18 as #17) is a consumable and is expressly excluded from this warranty.

Warranty period is 1 year, commencing on the date of purchase.

Under this warranty, Purchaser must first return the ActivO to ECOZONE, together with proof of purchase from an authorized dealer of ECOZONE (a "**Dealer**"), either directly, or through the Dealer from whom Purchaser purchased the ActivO, for examination by ECOZONE of entitlement under the terms of this warranty. All shipping, handling, travel, service call and/or other incidental and/or related charges are fully payable by Purchaser only and are not included in this warranty.

THIS WARRANTY IS IN LIEU OF ANY OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH ARE EXPRESSLY EXCLUDED AND DISCLAIMED. ECOZONE WILL NOT BE LIABLE FOR LOSS OF PROFITS, ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES WHICH PURCHASER MAY SUSTAIN, OR PUNITIVE DAMAGES, EVEN IN THE EVENT OF NOTICE OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL LIABILITY UNDER THIS WARRANTY EXCEED THE PURCHASE PRICE OF THE ACTIVO PRODUCT. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN

IMPLIED WARRANTY LASTS OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

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